

Chapter 5 Surface Area of Cylinders and Composite Solids

Worksheet C Mixed Practice and Application

Name: _____ Grade: _____ Date: _____

Use $\pi \approx 3.14$.

1. Painted Can

A closed cylindrical can has radius 4 cm and height 12 cm.

a. What measurement is needed if the outside is painted?

b. Find the surface area.

2. Open Container

A cylindrical container has no top.

It has radius 5 cm and height 9 cm.

a. Why should only one circular base be counted?

b. Find the outside surface area.

3. Tube Label

A cardboard tube has no circular ends.

It has diameter 6 cm and height 20 cm.

Find the area of cardboard used for the curved surface.

4. Hidden Face Composite

Two cubes with side length 4 cm are glued face to face.

a. Find the surface area of one cube.

b. Find the combined surface area before subtracting hidden faces.

c. Find the area of one contact face.

d. Subtract the hidden faces and find the final surface area.

5. Student Error

A student says:

“A closed cylinder with diameter 10 cm and height 6 cm has radius 10 cm.”

Explain the mistake and find the correct surface area.

6. Surface Area vs Volume

A cylinder has radius 3 m and height 7 m.

a. Which formula would find the amount of paint needed for the outside?

b. Which formula would find the space inside?

c. Explain the difference.
